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DAVID FLEAY

A HANDFUL OF CONTRADICTIONS, the furry platypus lays eggs like a bird

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UMI

ENZO DE CHETELAT

ORANGES as well as bananas provide livelihood for Guineans. These red-hatted Fulah tribesmen scrape the fruit, extracting essence of orange. The concentrate, exported, becomes the perfume base for toilet waters. The new country's exports may dwindle while it makes the transition from dependence on France to complete freedom. It previously was a small part of sprawling French West Africa.

Guinea's coast to France in part return for France's abandonment of its fishing rights in Newfoundland waters.

The word Guinea has many interesting associations. Geographers in the 14th and 15th centuries began using the term to describe coastal Africa beyond the Canary Islands. As European navigation pressed farther along, the name Guinea likewise moved southward, suggesting that the word may have represented the unknown to thinkers of the day. It was derived from an ancient and almost legendary inland trading town and kingdom called Ghinea, Genni, or Jenné, scholars believe. Or the name may have sprung from Ghana, oldest known state in the middle Niger region, from which modern Ghana takes its name.

In modern times the terms Guinea and Guinea coast have been applied to the entire mid-portion of Africa's west coast, from Gambia in the north to Angola in the south. The great watery indentation of the Atlantic Ocean that touches many of these lands is called the Gulf of Guinea.

NATIONAL GEOGRAPHIC PHOTOGRAPHER BATES LITTLEHALES

GUINEA started along the rocky road to freedom when it rejected the new constitution of French Premier Charles de Gaulle. It was the only region in the vast empire to do so.

Conakry (left), capital of the foundling nation, holds 50,000 of Guinea's two and a half million inhabitants. Apartment buildings of French colonial architectural style rise above fishing boats grounded in the port city's tidal harbor.

No large rivers flow from inland Guinea to the coast. Quite the opposite, interior highlands are drained by headwaters of the Senegal and the Niger—two great watercourses which flow inland before turning and reaching the ocean far from their sources.

UMI

GUINEA, World's Newest Nation

ENZO DE CHETELAT

WHEN IT COMES to dress, the grand ladies of few countries can outdo those of the world's newest nation—Guinea. Decked out for a tribal dance, these Susu girls could be preparing to celebrate the recent "no" vote that cast French Guinea out of the French empire.

If Guinea's independence receives international recognition, the West African banana-growing land will become earth's 103rd nation. The world reached the 103 mark in 1957 following the admission of Ghana and Malaya, but the total dropped when Syria and Egypt joined to form the United Arab Republic.

Oregon-size French Guinea nestles between Portuguese Guinea and Sierra Leone, a British colony, on Africa's west coast. Guinea's interior extends southward to touch the Republic of Liberia.

Guinea has enormous undeveloped riches. Gold, diamonds, iron ore, and bauxite lie under its jungles and plains. French, German, American, Canadian, and Swiss interests have invested in the development of these resources.

Some day Guinea hopes to be a world force in aluminum production. Even today, its industrial expansion is described as phenomenal. Under several four-year plans, France has modernized the country along a wide front ranging from hospitals and schools to roads and mines.

But the country remains primarily agricultural. Bananas and coffee lead among exports. Guinea has a wide diversity of terrain and climate. Fertile swamps along the torrid coast contrast with high and relatively cool plateaus in the interior. Rice and bananas flourish near the coast, while cattle thrive inland.

Despite its potential, Guinea has had to depend on French aid to maintain its economy, and remains backward in many respects. A single railroad runs from Conakry, the capital, to Kankan in the interior. Many roads disappear in mud during the rainy season.

Guinea's economic readiness for independence may be questioned, but the descendants of men who fought slave-traders have developed a taste for freedom. Sekou Touré, mayor of Conakry, declared recently that his people prefer "poverty in liberty to wealth in slavery."

France's interest in Guinea goes far back into history. Sailors from Dieppe supposedly visited the land in the 14th century. But the Guineans saw few Europeans—except slave traders—until the middle of the 19th century. In the early 19th century, France began to conclude treaties with local chiefs, and Guinea became a colony in 1881. In 1904 Great Britain ceded the Isles de Los off

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RETURN TO CHANGED AUSTRALIA

A National Geographic Reporter Discovers New Faces, New Vitality on the Island Continent

By Edwards Park

HOWELL WALKER, NATIONAL GEOGRAPHIC STAFF

It is incredible, but I feel lost. I stand on a Melbourne street corner—a place that was perfectly familiar seven years ago—and I recognize nothing. Gone are the old brown office buildings that gave a solid, British Empire look.

I look down the length of the street, searching for the distant row of warehouses I remember so well. Their walls were stained and pitted, their roofs sagged—but they were accepted as a permanent part of the city. They have vanished. Instead, a gleaming block of stainless steel and green-tinted glass soars against the sky.

Thirty miles from the city, open country held flocks of sheep. Today it sprouts modern ramblers with picture windows. Often two cars are parked outside them. Their kitchens and laundries usually pulse with the same electric gadgets that you would find in Dubuque, Iowa.

What causes this new look in Australia? I think the people themselves have changed. They have come of age as a nation and are flexing their economic muscles. When I talk to old friends, they're as cordial as ever, but a lot busier than in the easy-going days of two-hour lunches and four o'clock break for tea.

Australians used to talk largely of horse racing and football. They now argue mostly about the possibilities of an oil bonanza in the west. They discuss the birth of new industries and reminisce on recent visits to Rum Jungle (uranium prospecting), Broken Hill (iron and steel), or Yallourn (coal mining).

Australians don't look the same. The familiar Down Under specimens—tall men with big wrists and angular faces, extremely pretty girls—still walk the pavements and shop the arcades. But mingling with them is a growing host of continental Europeans—slender Latins, blond Scandinavians, and smiling Hungarians like the one above. In seven years they've helped the population swell from eight to ten million.

The impact of these New Australians goes beyond statistics. Restaurants once noted for "plain cooking" (another way of saying uninspired meals) now serve imaginative goulashes, shish kebabs, and smörgåsbords. Sidewalk cafés have blossomed with the fragrance of Paris. Many corners have Italian coffee bars.

This country, once so sternly Anglo-Saxon, is becoming a melting pot of Europeans. They nourish its industries and culture. They stimulate the entire citizenry.

In the old days, every Australian I met would ask, "How do you like it here?" as though hoping for a compliment. Now, no one asks me. They don't need encouragement; they know they're strong and progressive and they're too engrossed in the future to care what anyone thinks of them.

UMI

NATIONAL GEOGRAPHIC PHOTOGRAPHER BATES LITTLEHALES

Africa's March to Freedom

African countries that have achieved their independence since World War II, with their dates:

Libya	December 24, 1951
Sudan	January 1, 1956
Morocco	March 2, 1956
Tunisia	March 20, 1956
Ghana	March 6, 1957
Guinea	September 28, 1958

ARTHUR S. ALBERTS

England's gold piece, the guinea, was so named because it was first coined of gold from the Guinea coast. Guinea hens and guinea worms likewise came from that area, but guinea pigs picked up the name when they were transported from South America to Europe on Guinea slavers, it is believed.

The place name traveled to faraway New Guinea when an early explorer thought the natives resembled those in west Africa.

Guinea's greatest export has been people—the unhappy horde that filled the holds of slave ships en route to American plantations. Their lamenting songs were forerunners of Southern blues and spirituals. Jungle rhythms and drum beats of their happy, vibrant dance music lives on in American jazz. In tracing the origins of jazz, expeditions to the Guinea coast and interior have carried tape recorders and musical experts rather than elephant guns and white hunters. Such a safari into the birthplace of jazz was reported in the May, 1941, *National Geographic Magazine*.

More recently, one of the Magazine's photographers came upon the band of musicians shown above, wandering minstrel-like around the Conakry countryside. The player at left holds the *kora*, unique harp-guitar of Guinea.

EVERY PLATYPUS has a ravenous appetite. At right, a day's diet wriggles out of the keeper's fingers. A healthy duckbill can polish off 800 earthworms, a handful of grubs, and a dozen crayfish at a single meal. A self-respecting platypus can eat half his weight any night.

PHOTOGRAPHIC PROOF, below, that some animals lay eggs. A mother eyes her normal clutch of two, which lie permanently cemented together. The mother incubates her eggs by pressing them to her warm abdomen, then feeds her newborn with milk that oozes from pores in her skin. Normally this leafy nest would be found at the end of a burrow piercing up to 30 feet into the mudbank. Papa Platypus never sets paw in the nursery.

PHOTOGRAPHS BY DAVID FLEAY

BEST DEFENSE for the platypus is simply to put distance between himself and a foe. But if cornered, he carries a defensive weapon found in only one other furry mammal—a venom-laden spur. A single spur protrudes inside each hind foot of the male; the female carries none. An angry male, right, clamps his poisonous grip on an imaginary enemy. Australian fishermen who have caught a platypus by mistake testify to painfully swollen arms that disabled them for a week. A.P.M.

See Also: *National Geographic Magazines* —October, 1958, "Flight of the Platypuses" ($1); February, 1949, "Biggest Worm Farm Caters to Platypuses" ($1).

UMI

The Paradoxical Platypus

"AS IMPOSSIBLE as a mermaid!"

That was the reaction of European zoologists a century and a half ago when they were told about the platypus.

"Do you Australians mean to say that you have an animal with a bill like a duck, fur like a mink, webbed feet like an otter, tail like a beaver?

"What's more, an animal that lays eggs like a bird, hatches them, then suckles the young like a mammal? Nonsense! A hoax!"

But it's true.

The platypus shares with another Australian native, the spiny anteater, the honor of being the only mammals to retain the reptilian characteristic of laying eggs.

The platypus is a shy creature that burrows into mudbanks along the continent's eastern fringe. It wears its fame easily. Only with gingerly handling could Australian Naturalist David Fleay coax three contented platypuses to leave his West Burleigh Fauna Preserve last year and be carried to New York. As a result, the Bronx Zoo is the only institution outside Australia to exhibit nature's "hoax" alive and swimming.

The platypus is found only in the shaded areas, nowhere else in the world.

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W. ROBERT MOORE, NATIONAL GEOGRAPHIC STAFF

SURFACING to peer about his zoo pool, the duckbill, left, strikes out for a rock with his webbed front feet, steering with his hind ones. In nature, he sleeps by day, forages for food at night. When hunger gnaws, he slips into the water from his burrow, carefully keeping his eyes peeled skyward for enemies like swooping owls or hawks. Reaching his hunting ground, he squeezes shut the elongated furrow over his eyes and ears (see cover), and dives. Underwater he literally "noses" around for his supper. The shoehorn-shaped bill is jam-packed with nerves. When it signals a choice tidbit like a crayfish, he snatches the prey in his bill and heads for the surface, shaking his head like a terrier. He grinds his food between horny plates, assisted by grit and gravel he keeps handy in his cheek pouches.

I felt I was speaking as well as my classmates.

In the beginning the kids thought it strange that I didn't know their language, but very soon I had many friends.

The things we study are not very different from subjects in the States. I am taking mathematics, Spanish grammar, geography, drawing, botany, civics, music, and physical education. In one of my classes I know more than the teacher —but that's not surprising, because it's English. All the students take English from the third grade up.

Guanajuato is something like Williamsburg, Virginia, except that it preserves Spanish Colonial architecture rather than English Colonial. During the 17th century gold and silver mines made its people very wealthy, and they built great churches and homes. But the rich ore gave out and Guanajuato lapsed into quieter ways. One hundred and fifty years passed it by with little change. Away from major roads, it still is quiet and peaceful. Everything is old and quaint. By law, no building can be put up in a modern style. The roofs are flat, and the houses hug hillsides,

so that it is possible to look from one into the patio of the one below. Like many of the buildings here our large, stone school (below) shows Spanish influence.

At the beginning of the century the hills around here were covered with great forests but now they are almost completely bare, for the woodcutters have taken even the smallest of saplings.

Recently the government has started a reforesting plan and some of the boys and girls of the University have formed a club to help. We go out Saturday afternoons to plant trees. So far, we've put in a thousand.

During the rest of my free time I do some swimming, work on my stamp album, or go on hikes in the mountains with my friends. I also like to walk down to the big market and see the men and women at their stalls. I take pictures of the ones that look most interesting, like the bird seller above. Most of the boys here like basketball and baseball. One touch reminds me of home: most of the jukeboxes feature United States music.

PHOTOGRAPHS BY JONATHAN CLOUD

UMI

CECIL B. ATWATER

SINCE WORLD WAR II, overseas interests and projects of the United States have caused many families to live in foreign countries. High among problems of their new life is education. For thousands, special American schools have been set up in such centers as Paris and Moscow. Others enter the schools of their temporary homeland. In observance of American Education Week (November 9 to 15), the *Geographic School Bulletins* presents a story and photographs by a youngster who is learning about Mexico by sharing its life. Jonathan Cloud, 13, attends the Universidad de Guanajuato. His studies are similar to junior high work in the United States.

I Go to School in Guanajuato

HOW WOULD YOU like to go to school where you have three hours off for lunch and a three-month Christmas vacation? That's the way it is in Mexico, where I have lived with my mother for four years. School customs here are different from those in the United States. But everything adds up to about the same education you get at home, only with more discipline.

The long winter vacation takes the place of summer vacation up north. In the pleasant old town of Guanajuato (above) the climate is much the same all year 'round, so it is not too hot to go on studying in the summer. Mexicans observe a great many holidays around Christmas time, so it was logical to have the vacation then.

The three-hour lunch period means that everybody can go home for his biggest meal of the day. For a while, I lived with a Mexican family, and for dinner we had soup (never canned), a plate of rice with a banana cut up into it and a fried egg on top, a very thin slice of pounded beef, fried beans, and some fruit for dessert.

Before afternoon classes, I have time to study or go swimming. The long free period doesn't do much to shorten the day's work—I have classes from 8 a.m. to noon and from 3 to 6 p.m. Also, there are classes Saturday morning.

One thing I don't do is take a siesta. I don't see how anybody got the idea that all Mexicans take a siesta every day.

Coming to a new country and entering the schools is a strange experience. At first, I knew no Spanish at all. But after a few months I found I could understand the teachers, and by the end of the year

New Orleans is below the level of the Mississippi. Levees hold back the waters, and captains berth their ships higher than the houses.

The land is as flat as a floor except in one place. To give their children an idea of what a hill is like, Orleanians were forced to build one. The man-made mound rises in Audubon Park.

A heavy rain could drown much of New Orleans in a matter of hours—but a huge drainage system sucks out the water with monstrous pumps. The feat was not always so easily managed. One Orleanian flatly denies the charge that he has webbed feet. "But," he concedes, "I'll never swear that grandma didn't."

New Orleans was making history when most of the continent had only four-legged life. Spain had a vague claim to all the Lower Mississippi, but it was France that began settlement on the Gulf in 1699. Some 20 years later, the French had settled on the city's site.

Before the United States took over with the Louisiana Purchase of 1803, New Orleans was French, then Spanish, then French again. Mixtures of these races produced the Creole, whose descendants flavor the city today.

The Mississippi traffic that is so vital to New Orleans has had its slumps as well as booms. During the 1840's more than half the tonnage of boats registered in the United States plied the river.

The end came suddenly after the Civil War, when steamboats were eclipsed by the faster railroads.

World Wars I and II, however, revived the waterway. The government, to relieve transportation congestion, fell back on the old method. The lesson was learned by private enterprise: heavy goods such as oil, metal, grain, building materials, salt, sulphur, ores, and chemicals can be carried far more economically by water than by land.

Now fleets of barges pushed by "towboats" stream out along the river, tied together in rafts that may be longer than an ocean liner.

A single barge will hold a million gallons of oil, compared to a railroad tank car's 13,500 gallons. A group of barges and one towboat can move as much oil as two ocean-going tankers. F. S.

UMI

FAIRCHILD AERIAL SURVEYS, INC.

PULSING NEW ORLEANS—

Heart of Midwest Trade

IN SOUTHERN LOUISIANA, the Mississippi River marries the Gulf of Mexico, giving birth to the city of New Orleans.

Prosperous and fun-loving, the port stands in the center of a two-way funnel. The tawny river system to the north drains 40 percent of the United States.

Ocean trade routes fan south to South America, Asia, Europe, and Africa. As doorkeeper for the central United States, New Orleans has become the second largest port in the country in value of goods handled.

About 13,200 miles of navigable waterways link New Orleans to such widely separated centers as Kansas City, Omaha, Sioux City, St. Louis, Minneapolis-St. Paul, Chicago, Louisville, Cincinnati, Wheeling, and Pittsburgh.

Into its wharves and warehouses pours a stream of goods from all maritime nations—raw sugar, green coffee, cocoa beans, mahogany logs, jute, sisal, copra, rubber, hides, bananas by the millions.

In return, ships carry away almost every type of product made in the United States.

With all this traffic, New Orleans is still no seaport—110 miles of winding river separate it from blue water. To handle its flood of goods more easily, New Orleans works to bypass the river that made it.

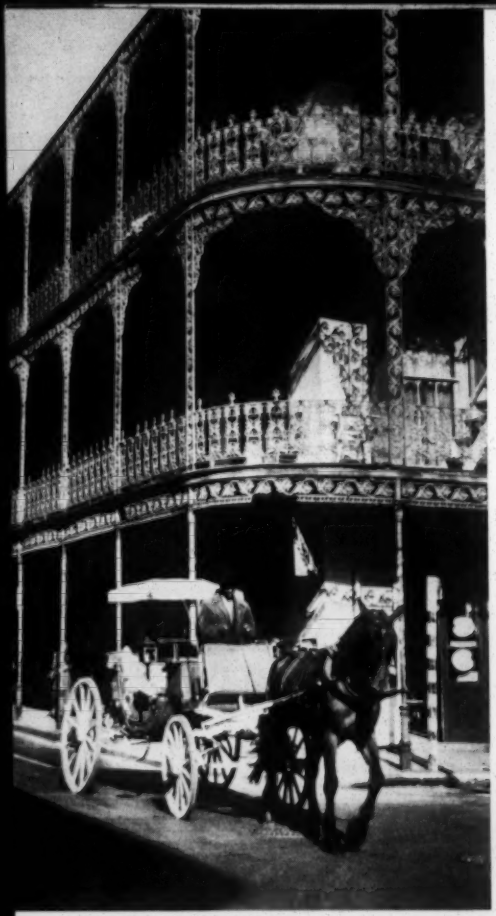
Below the city, the "Father of Waters" is fickle and silt-laden. Regular dredging is needed to maintain its depth. Occasionally a ship runs aground.

Last year, Army Engineers started digging the Mississippi River-Gulf Canal to remedy the situation.

A tidewater ditch 40 feet deep, it will run 71 miles southeast through swamp and shallows to the Gulf.

When finished, it is expected to need less dredging than the present channel, and will cut 40 miles off the route. Construction cost has been estimated at $100,000,000, but it is expected to save ships an average of $1,500 each visit.

The city they come to is a sprawling metropolis on the mud flats. Much of



PHOTOGRAPHS BY JUSTIN LOCKE

Lures of Gracious Living Call Many to New Orleans

IRON GRILLWORK frosting the Labranche house on Royal Street stands as a trademark of New Orleans. From such ornamental balconies in the French Quarter of the city, Orleanians watch the surge of life in the city that trades with the world and gave jazz to the U. S. Harnett T. Kane, native of New Orleans, wrote in the *National Geographic Magazine* (February, 1953): "A good time here may mean an evening on a balcony in the Vieux Carré (old quarter), watching the shadows against a blue-stuccoed wall, and letting the rest of America stroll by. Or an afternoon of good talk with friends in a converted plantation house. Or a quiet meal in one of several superlative restaurants, or in a private home whose cook treasures 'receipts' inherited from *grand'mère*, which she will not divulge to her mistress."

MANY PEOPLES took a hand in fashioning New Orleans's reputation for excellent cooking. From the French the cuisine took a basic flavoring, a delicacy of taste. To this the Spanish added fragrant spices and piquant combinations; the Indians contributed roots and herbs; the Negro, skills in mixing mouth-warming ingredients.

From the marshes and the swamps of Louisiana, from the Mississippi and the Gulf of Mexico, come fish, shellfish, and game, for soups, stews, bisques, bouillabaisses, and the famed jambalaya, a highly flavored combination of shrimp, oysters, tomatoes, rice, and other items. Fine restaurants nurtured in this tradition offer their own specialties, such as oysters Rockefeller at Antoine's, right, a rich combination of oysters and spinach sauce. Antoine's has been serving the distinctive New Orleans cuisine since 1840.

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